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THE PROPERTY OF
The Normal School
STRATFORD, ONT.

SYLLABUS

OF

Regulations and Courses

FOR

The Normal Schools

AT

Hamilton, London, North Bay, Ottawa, Peterborough, Stratford, and Toronto.

SESSION 1911-1912.

TORONTO:
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The Normal Schools of Ontario
1911-12.

LOCATION AND PURPOSE.

1.—(1) The Normal Schools are situated at Hamilton, London, North Bay, Ottawa, Peterborough, Stratford, and Toronto.

(2) The purpose of the Normal Schools is to prepare teachers of the Second Class, in the theory and the art of organizing, governing, and instructing the pupils of the Public and the Separate Schools; and to improve the general culture of such teachers and, in particular, their academic preparation for teaching the subjects prescribed in the programme of studies.

NOTE.—In addition to the work prescribed for the other Normal Schools, the School at North Bay prepares teachers-in-training for Third Class Certificates. For this School and its special conditions a separate announcement is made, which may be obtained on application to the Deputy Minister.

(3) The Normal Model Schools, the Model attached Public Schools, and the attached Rural Schools, are used, as required, to afford the teachers-in-training adequate means of observing well-conducted Schools, and of securing practice in teaching, discipline, and management.

GRADES OF TEACHERS-IN-TRAINING.

2. There shall be two grades of teachers-in-training:

GRADE A.—Those who hold professional Third Class certificates with at least Junior Teachers' academic standing and have taught successfully a Public or a Separate School for one year.

GRADE B.—All others who hold Junior or Senior Teachers' academic certificates or who have passed the full examination for Entrance to the Faculties of Education or to the Normal Schools.

NOTE.—If the number of Teachers of Grade A standing applying for admission to any school is not sufficient to justify forming a class, such applicants will be required to attend one of the other schools.

SESSIONS AND VACATIONS.

3. (1) The session of the Normal Schools will begin and end as follows:

(*a*) The Session will begin on Tuesday, September 26th, at 9 a.m.

(*b*) For teachers-in-training belonging to Grade A., who may qualify at Easter for Second Class Certificates, it will end at a date to be fixed hereafter.

(*c*) For all other teachers-in-training it will end on Friday, June 21st, 1912.

(2) There shall be two vacations as follows:

(*a*) At Christmas, beginning on December 16th, 1911, and ending on January 2nd, 1912.

(*b*) At Easter, beginning on the Thursday before Good Friday and ending on the Monday following Easter Monday.

CONDITIONS OF ADMISSION.

4. (1) Application for admission shall be made to the Deputy Minister not later than Tuesday, September 5th, on a form to be supplied by him.

(2) Candidates who have appealed against the results of the July examination should apply for admission as above. If their appeals are successful they will be admitted on the same terms as other applicants.

NOTE.—To those who have complied with the prescribed conditions, a card of admission will be sent. Without this card no one will be admitted.

5. (1) The applicant shall forward with his application to the Deputy Minister, on official forms supplied by him, the following certificates:

(*a*) A certificate from competent authority that he was at least eighteen years of age before October 1st, 1911.

(*b*) A certificate from a clergyman or other competent authority that he is of good moral character.

(*c*) A certificate from a physician that he is physically able for the work of a teacher, and, especially, that he is free from serious pulmonary affection and from seriously defective eyesight or hearing.

(2) The applicant shall also submit one of the following:

(*a*) A professional certificate, an academic certificate, and a certificate of successful experience from an inspector, entitling the applicant to become a member of Grade A (see section 2).

(*b*) A full Junior or Senior Teachers' Academic certificate.

(*c*) A certificate of having passed the July academic examination for Entrance into a Faculty of Education.

(*d*) A certificate of having passed the July academic examination for Entrance into the Normal Schools, having endorsed thereon the prescribed certificate from the Principal of an Approved School that the applicant has completed satisfactorily the Lower School subjects of the High School course prescribed for entrance into the Normal Schools.

(3) Other applicants than those holding the qualifications prescribed in (2) above, shall present, beside the certificates required in (1), (*a*) (*b*) *and* (*c*) above, a certificate of having passed the July academic examination, and shall pass in addition in September an examination in the prescribed subjects of the High School Lower School in accordance with the following time-table, the pass standard being 40 per cent. of the marks for each subject and 60 per cent. of the aggregate:

TIME-TABLE.

Tuesday, September 12th.

A.M.	8.45— 9.00	Reading Instructions to Candidates.
	9.00—11.00	Writing, Book-keeping and Business Papers.
	11.10—12.00	Spelling.
P.M.	1.30— 3.30	Geography.

Wednesday, September 13th.

A.M.	9.00—11.00	English Grammar.
P.M.	1.30— 3.30	Biology.

Thursday, September 14th.

A.M.	9.00—11.00	Arithmetic and Mensuration.
P.M.	1.30— 3.30	Art (Pencil and Brush Work).

NOTE.—For the examination in Art, candidates must come provided with drawing pencils, brushes, and color boxes.

(4) This examination will be conducted at such of the following centres as may be requested by applicants prior to September 1st:

Windsor, Chatham, Sarnia, St. Thomas, London, Woodstock, Brantford, Simcoe, Cayuga, Welland, St. Catharines, Hamilton, Goderich, Stratford, Berlin, Guelph, Walkerton, Owen Sound, Orangeville, Barrie, Toronto, Whitby, Bowmanville, Cobourg, Lindsay, Peterborough, Belleville, Picton, Napanee, Kingston, Brockville, Prescott, Morrisburg, Cornwall, Alexandria, Vankleek Hill, Ottawa, Smith's Falls, Renfrew, Bracebridge, North Bay, Sault Ste. Marie, Port Arthur, Haileybury.

(5) Forms of application and full information for this examination will be sent to those who are required to write thereon, immediately on the receipt of their applications for admission. Applications to write on the examination must be received at the Department of Education not later than Sept. 1st. Only *bona fide* applicants for admission to a Normal School for the ensuing session are eligible to become candidates at this examination.

(6) No one will be admitted to a Normal School who does not agree if successful in obtaining a teacher's certificate, to teach thereon in the Province of Ontario for at least the first year of his subsequent teaching experience. A violation of this agreement will lead to the cancelling of the teacher's certificate.

Candidates are hereby notified that they must present themselves at the date prescribed in paragraph 3 (1), and comply fully with the conditions prescribed in paragraphs 4 and 5.

DUTIES OF PRINCIPALS AND ASSISTANTS.

6. (1) Subject to the regulations and to the approval of the Minister of Education, the Principal of each Normal School shall prescribe the duties of his staff and shall be responsible for the efficiency of the Normal and the Model School.

(2) The other members of each staff shall be subject to the authority of the Principal.

(3) Subject to the direction of the Minister, each Normal School Master, in company with the Public School Inspector, shall visit each year Rural Schools in the district in which the Normal School is situated. He shall submit a report of his observations for the consideration of the whole staff of the Normal School.

(4) Each Principal shall submit to the Minister of Education, not later than Dec. 31st of each year, a report in detail upon the character of the preparation of the teachers-in-training in attendance who have been admitted on certificate from the Principal of each Approved School.

(5) Subject to the direction of the Minister, each member of the Normal School staff shall take part in the work of the Teachers' Institutes at such dates as the Minister may arrange.

DUTIES OF TEACHERS-IN-TRAINING.

7.—(1) Teachers-in-training shall board and lodge at such houses only as are approved of by the Principal.

(2) They shall attend regularly and punctually, and shall submit to such discipline and directions as the Principal may prescribe.

(3) Teachers-in-training who, in the opinion of the staff, are unduly defective in scholarship, or whose conduct or progress is unsatisfactory, may be dismissed by the Principal at any time during the session from further attendance at the Normal School.

(4) **All applicants are strongly advised to review carefully before entering, the work of the Lower School of the High Schools.**

TEXT-BOOKS.

8.—(1) The text-books for the academic work shall be those prescribed in such subjects for the High Schools.

(2) The text-books for the professional work shall be the text-books prescribed for the Public Schools, and the professional works whose titles are printed below in italics.

LIBRARY.

9. Under the direction of the different members of the staff, the Library shall be constantly used for consultation by the teachers-in-training. To this end it contains a supply of books of general literature, and a sufficient number of copies of each of the most important professional books of reference, a list of which is given in this Syllabus.

LITERARY SOCIETY.

10. A Literary Society for general culture and for professional advancement shall be established in each Normal School, and shall be fostered by the staff as an important part of the Course of Study. It should begin immediately after the work of organization has been completed, and should meet once each week until the special preparation for the final examination begins. The programmes should include essays, debates, recitations, and the reproduction of suitable scenes from standard plays. Suitable lecture courses also will be arranged for under the direction of the Minister of Education.

EXAMINATIONS.

Subjects and Values.

11.—(1) (*a*) The final standing of the teacher-in-training shall be determined on the combined results of his sessional records and his prescribed examinations.

(*b*) In addition to oral and written class tests in each subject, and the Observation and Practice-teaching records, there shall be a written examination in the subjects of Groups I. and II. below, immediately before the Christmas vacation.

(*c*) There shall be two Final written examinations in Groups I., II., and III., one at Easter for the teachers-in-training belonging to Grade A.; and one at the close of the Session in June for the teachers-in-training belonging to Grade B., and for those of Grade A who fail to qualify at Easter or who postpone their examination.

(*d*) Each of the Easter and June examinations shall be based on the work preceding it. The final examination papers in Groups I. and II. shall be uniform for all the Normal Schools, and shall be based upon the courses as laid down in this Syllabus.

(*e*) The examinations in Groups II. and III. shall be based on the courses as laid down in this Syllabus, and shall include a thorough test of the academic qualifications of the teacher-in-training for teaching all grades of Public School work.

(2) At each examination in Groups I. and II. there shall be one paper on each of the following subjects and the maximum marks for each subject shall be 100; the marks for the Christmas Examination and the Sessional Records in each subject being 40 per cent. of the maximum.

Group I.

Professional. Science of Education, History of Education, School Organization and Management.

Group II.

Academic and Professional. Arithmetic, Algebra and Geometry, Literature, Grammar, History, Composition, Geography, Elementary Science, and Nature Study and Agriculture.

Group III.

(3) The marks counted in estimating the final standing of the teacher-in-training in the following subjects shall be those awarded him during the session, more especially toward the close thereof, for the oral, written, and practical tests in matter and, where applicable, in method, the maximum for each subject being 100 each, except for Manners, for which the maximum shall be 50 (25 for the paper, and 25 on the report of the staff as to the general deportment of the teacher-in-training).

Academic and Professional. Art, Music, Reading, Spelling, Manual Training, Household Science, Physical Training, Writing and Book-keeping, Hygiene, and Manners.

Group IV.

(4) The marks counted in estimating the final standing of the teacher-in-training in Observation and Practice-teaching shall be those awarded him in these subjects during the session and more especially toward the close thereof, after an introductory course of lessons in each. The maximum marks for Practice-teaching shall be 1,200, and those for Observation lessons 200.

CERTIFICATES.

12.—(1) A teacher-in-training belonging to Grade A, who, at the Easter or the June final examinations, obtains 40 per cent. of the marks in each subject and 60 per cent. of the aggregate of the marks for each of Groups I., II., III., and IV., may, on the recommendation of the staff, be awarded a permanent Second Class certificate, provided he is then twenty-one years of age, or an Interim certificate valid until he reaches that age, when a permanent certificate may be issued on application.

(2) A teacher-in-training belonging to Grade B, who at the June final examination obtains 40 per cent. of the marks in each subject and 60 per cent. of the aggregate of the marks for each of Groups I., II., III., and IV., may on the recommendation of the staff be awarded an Interim Second Class certificate, which will be made permanent at the end of two years' successful experience duly certified on an official form by the Inspector concerned, provided the teacher is then twenty-one years of age. An Interim Second Class certificate which expires before the teacher is twenty-one years of age, or before the holder has taught two years thereon, may be renewed until that date, on the recommendation of the Inspector concerned.

(3) (*a*) A teacher-in-training who at the June final examinations fails to obtain a Second Class certificate but who makes at least 60 per cent. in Group IV., and 35 per cent. of the marks in each subject and 55 per cent. of the aggregate of the marks in each of Groups I., II., and III., may on the recommendation of the staff be awarded a Third Class Certificate valid for two years.

(*b*) Such teacher-in-training who at a subsequent Easter or June examination passes at one examination, in the Group or Groups in which he failed may be awarded an Interim Second Class certificate on the conditions prescribed in (2) immediately preceding.

(4) All other teachers-in-training shall be required to attend a second session.

(5) Candidates who have not attended a Normal School, who are exempt from such attendance, and who are actually engaged in teaching, may take Groups I., II., and III., at the same examination or at different examinations, and shall be exempt from an examination in Group IV., provided they submit to the Minister a certificate from their last Inspector that they have taught successfully. The pass standard shall be 40 per cent. of the marks for each subject and 60 per cent. of the aggregate of marks for each of Groups I., II., and III.

PROGRAMME OF STUDIES.

AT THE ONTARIO AGRICULTURAL COLLEGE, GUELPH.

NOTE.—A circular containing the details of the courses and the regulations connected therewith may be obtained on application to the Principal.

13.—(1) Beginning in April at a date to be settled, a course of about ten weeks will be provided at the Ontario Agricultural College, Guelph, in Elementary Agriculture and Horticulture and in Elementary Industrial Training, with concurrent discussion of methods, supplementary to the courses in these subjects in the Normal Schools, for teachers-in-training who pass the April examination for Second Class certificates. The object of the course is to provide duly qualified teachers for the Public and Separate Schools in—

(*a*) Elementary Agriculture and Horticulture; and

(*b*) Elementary Industrial Training.

(2) The above courses at the Agricultural College are optional, and teachers-in-training may take either, but not both.

AT THE NORMAL SCHOOLS.

14.—(1) The courses at the Normal School shall consist of the following:

(*a*) A review of the Public School course and of the academic subjects prescribed for admission into the Normal Schools, especially those of the Lower School, from the standpoint of pedagogy and the requirements of the Public and Separate Schools, with such an extension of said subjects for the purpose of culture as time will permit; also special instruction in Reading, Writing, Art, Physical Training, Physiology and Hygiene, Music, Household Science, Manual Training, Manners, School Law and Regulations.

(*b*) The Science of Education, including Applied Psychology and Ethics, Child Study, and General Methodology; the History of Education; Special Methodology; and School Organization and Management.

(*c*) Supervised Observation in the Model Schools, also in the affiliated Rural Schools of the adjoining county or counties.

(*d*) Supervised Practice-teaching in the Model Schools.

2. For teachers-in-training of both Grades A and B. the main details of the courses shall be the same. The provision in Reg. 15 below refers to Grade B. The courses for Grade A shall be more intensive than those for Grade B.

Teachers-in-training belonging to Grade A will be assumed to have made themselves familiar with Bett's "The Mind and its Education," and McMurry's "The Method of the Recitation," before entering the Normal School.

ORDER OF THE COURSES.

Introductory.

15.—(1) In order that the teacher-in-training may begin early the Observation work and the Practice-teaching, the following introductory courses shall be taken up in the following order, having due regard to the requirements of Grades A. and B. respectively:

(*a*) The introduction to the Science of Education (p. 12), and those parts of the Applied Psychology, and Child Study which bear most directly upon General Methodology, the prime essentials of which shall be discussed in this connection. To this course shall be added a discussion of the functional value of each of the Normal School courses.

(*b*) A course of Observation in the different forms of the Model Schools.

One lesson a day shall be given in the course in (*a*); the total number being about twenty-five; and the number of introductory Observation lessons not exceeding ten.

Sessional.

(2) To prevent the dissipation of energy which would result from the concurrent study of a large number of subjects diverse in content, the system of intensive study should be followed so far as the special qualifications of the members of the staff will permit. In the order of the courses and the grouping of the subjects, due regard should be had to the character of each subject and its natural relations, and to the logical development of the courses and their relative functional value in the pedagogy of the Public School programme. When a subject has been finished, it should from time to time be reviewed with a further extension of the most important parts, having due regard to its character and importance.

(*a*) On the professional side, after the completion of the Introductory Course [15 (1)], the course in the Science of Education should be taken up three times a week until finished. The course in School Organization and Management should be taken up from the first three times a week until finished. The History of Education should not be taken up until after Christmas.

(*b*) The total number of periods for each of the professional subjects should be as nearly as practicable as follows:

The Science of Education, including the Introductory course, 70; School Organization and Management, 65; the History of Education, 32; Manners, 5.

(*c*) The number of lessons per week for each of the professional and academic subjects shall be, as nearly as practicable, as follows: Mathematics, 3; English (Grammar, Literature, History, Language and Composition, Spelling, and Reading), 7; Science (Physics, Chemistry, Biology, Geography, and Physiology and Hygiene), 5; Art, 2; Music, 2; Manual Training, 1½; Physical Training, 1; Writing and Book-keeping, 1; Domestic Science, 1½; Literary Society, 1; Observation and Practice-teaching (minimum), 4; Religious Instruction, 1.

(3) The foregoing principles of selection and order should also be observed in the Special Methodology and the academic treatment of the other subjects of the course:

(*a*) In the Mathematical group, Arithmetic should be taken up before Algebra and Geometry, being taken three times a week for about the first six months. It should then be continued with one lesson a week to the end of the session, the other two periods being given to Algebra and Geometry.

(*b*) The subjects of the groups, Geography and History; Language, Grammar, and Composition; and Phonics, Voice Culture, and Reading should respectively be related in organization as are the subjects of the mathematical group; Geography, Language and Grammar, and Phonics and Voice Culture preceding in their respective groups.

(*c*) In the Science group, the Biological side should be given special attention during the Autumn and the Spring, and the Science subjects should be taken up first from the Nature Study point of view. On account of their relations to parts of the courses in Art, Domestic Science, and School Management, suitable introductory courses bearing directly on these subjects should be provided in Chemistry and Physics. So, too, on account of its basal relations to Psychology, Physical Training, Music, and School Management, the course in Physiology should be taken up at the beginning and completed as soon as practicable.

(*d*) The courses in Music, Art, Writing, Physical Training, Literature, Manual Training, and Domestic Science should continue throughout the session.

(*e*) Short courses should be provided at the beginning of the session in Spelling and Manners; and, toward the close, in School Law and Regulations.

OBSERVATION AND PRACTICE TEACHING.

16.—(1) The Introductory Courses provided for in Regulation 15 shall be followed by systematic Observation and Practice-teaching, the minimum number of Observation lessons being 40 and of Practice-teaching lessons 25 for Grade B, and 20 for Grade A. teachers-in-training, but these numbers shall be increased to meet the necessities of individual teachers-in-training.

(2) (*a*) The teachers-in-training shall be divided into suitable groups, and the work of Observation and Practice-teaching shall be taken up systematically per time-table arranged from time to time.

(*b*) At least that group to which the teacher-in-training belongs shall be present at the discussions on his Observation and Practice-teaching lessons.

(3) (*a*) The Observation and Practice-teaching lessons for each teacher-in-training shall, as far as practicable, be arranged so as to cover the work of the Public Schools in all subjects and in all grades.

(*b*) The Observation and Practice-teaching lessons provided for in the logical development of the Normal School course shall be supplemented by other lessons in such forms of the Model School as may be available.

(*c*) Continuous Practice-teaching for several periods toward the end of the course shall be required, the teacher-in-training being wholly responsible for the discipline of the class.

(*d*) Teachers-in-training shall be available as substitutes in the Public or Separate Schools of the locality (urban or rural) in which the Normal School is situated, subject to arrangement with the Principal of the Normal School.

(4) (*a*) Teachers-in-training shall be notified by the Principal, of the subject and the scope of the Observation lesson, and shall prepare the lesson beforehand.

(*b*) After observing the lesson, they shall submit a report upon it to the Model School teacher concerned.

(5) (*a*) Teachers-in-training shall be notified of the subject and the scope of the Practice-teaching lesson, by the Model School teacher after consultation with the Normal School Master concerned.

(*b*) Teachers-in-training shall prepare a plan of each Practice-teaching lesson for submission to the Model School teacher concerned.

(6) (*a*) Model lessons shall be taught by the teachers of the Model School in accordance with the regular programme of the Model School.

(*b*) The Normal School masters in charge of the academic work in a subject shall develop its details in their teaching order, and after each suitable step, shall also themselves teach model lessons in special Public School classes in the Normal School and in the Model School itself. At these lessons, the Model School teacher in charge of the subject shall be present.

(7) (*a*) The necessary applications of the Science of Education and of Special Methodology shall be made systematically by both the Normal School Masters and the Model School teachers in connection with the Model and the Observation lessons and the Practice-teaching; so that the course may be taken up in terms of the child's mind and growth. From time to time the Master in charge of the Science of Education should formally illustrate by actual teaching the principles he has discussed in class.

(*b*) As far as practicable, it shall be the duty of the members of both the Normal School and the Model School staffs, in accordance with the time-table, to be present at the Observation lessons and Practice-teaching of the teacher-in-training and to make jointly the criticism and the valuation of his work.

(8) Concerted work on the part of the Normal and the Model School shall be secured by frequent conferences of the staffs of both schools, especially at the beginning of the session.

DETAILS OF COURSES.

Science of Education.

17. The object of the course in the Science of Education is to provide the teacher with a working conception of the nature of education which will be useful to him in forming ideals and determining procedure, to give him a rational basis for intelligently evaluating and selecting subject matter and methods of instruction, and to improve natural tact and skill through the acquisition of experience, with the least expenditure of time and energy. The course, which shall be as *practical* as possible, includes Applied Psychology, Child Study, and General Methodology.

I. *Introduction.*

18. *The Aim of Education*: Provisional statement of the aim of education to be used as a working definition.

Function of the School: Function of the School in directing the development of the child's experiences during the plastic period; relation of the school to other social institutions, the home, the church, the state, the vocation.

Subjects of Study: School studies as typical forms of experience that the race has found valuable in meeting its needs; basis for determining the functional value of a subject in a course of study.

Methods of Instruction: The purpose of method; necessity for basing methods of instruction on a knowledge of the characteristics and the conditions of mental life; the problem of method a psychological problem. A preliminary outline of the general principles of method.

Books of Reference:—

McMurry: *The Method of the Recitation.* 75 cts.
Bagley: The Educative Process.

II. *Applied Psychology.*

19. *Problems and Methods of Psychology*: The subject-matter of psychology; the essential characteristics of mental life; contrast between mental and physical phenomena; "stream of consciousness" and its "contents"; knowing, feeling, and willing; their interdependence.

Methods of studying the facts of mental life; the meaning of introspection; the limitations of introspective methods; methods of observing and interpreting the expressive signs of mental life; the attitude of the teacher as an observer; the place of experimental methods.

Nervous System and Mental States: Body and Mind, general nature of their connection; illustrations to show that mental life is dependent on physical conditions; outline study of the structure and functions of the nervous system in so far as it is related to mental processes; relation of mental growth to the development of the nervous system; conditions of sensory and motor development, development of the nerve centres through natural growth and through use; effects of disuse on nerve cells; connection between sensory and motor action; development of nerve connections; the "reflex arc"; automatic and reflex acts; the process of the growth of motor control; importance of a knowledge of the growth of the nervous system to the teacher.

Instincts: The place of natural tendencies in the development of mental life; the nature of instincts; outline study of some of the more important human instincts; transitory character of many instincts; necessity for utilizing instinctive tendencies at the time of their appearance; the adaptation of the subject-matter of instruction to the stage of natural development of the child; the dangers of introducing subjects too soon or too late; useful and injurious instincts; methods of strengthening and modifying instincts through use, and of weakening or eliminating them through disuse, substitution or repression; transformation of instincts into habits.

Habit: Nature of habit; physical basis of habit; the functions and limitations of habit; the dangers of mental "fossilization"; the relation of habit formation to school studies, especially those involving the acquisition of skill, such as writing,

reading, manual training, art, etc.; pedagogical rules for the formation of new habits or the breaking up of old ones.

Interests: The nature of interests; interests as tendencies to thought and action.

Interests as an end to be sought in education; the importance of the cultivation of desirable and suppression of undesirable tendencies; instinctive interests; a classification of the more common instinctive interests; the relation of acquired to instinctive interests; the reciprocal character of knowledge and interest; growth of purposes and plans from natural instincts.

Interest as a means in education; tendencies as the starting points in acquisition of knowledge or the formation of habits of action; practical teaching rules for applying the principle of interest in gaining knowledge; the relation of interest to effort; distinction between the interesting and the easy, and between the interesting and the pleasurable.

Capacities and Activities: Examination of some of the more fundamental capacities.

Sensitivity: The relation of sense impressions to the growth of knowledge. Retentiveness: The importance of retention in the growth of experience; conditions of retention. Relating activity: First steps in thinking; dissociation, discrimination, and association as activities. Expression: Process of giving significance to motor movements; relation of impression to expression.

The development of capacities through experience; the place of formal discipline as an end in education.

Apperception: Mental states or acts as dependent on original tendencies and previous experience; the development of mental life as conditioned on the interaction of the "old" and the "new"; learning as the development of experience into experience; necessity for making experiences meaningful; the process of interpreting the new in terms of the old; the necessity for studying the child's tendencies and capacities in selecting and presenting the subject matter of instruction; significance of the pedagogical maxim, "Proceed from the known to the related unknown."

Attention: The nature of attention; the selective character of attention; meaning of concentration of attention, dispersed attention and inattention; conditions of non-voluntary, or spontaneous attention; the relation of habit to attention; methods and devices for securing spontaneous attention; the conditions of voluntary attention; growth of purpose and plans; the importance of an aim on the part of the learner; the development of aims and ideals as an end in education; methods of securing voluntary attention; the application of the law of derived interest to school studies; the relation of voluntary to non-voluntary attention; gaining and holding attention; physical conditions favourable and unfavourable to attention.

Sensation and Perception: Sensation as a mental process; the physical conditions of sensation; classification of sensations; sensation qualities; the nature of perception; the presented and reproduced factors in perception; the functions of sensation and perception as forming the basis for thought; the development of perception; the growth of percepts in richness and definiteness through the detection of new features connected with old things; the meaning of observation; the relation of observation to alertness and keenness of sense activity and to knowledge, interests and purposes; methods of cultivating habits of observation.

Imagination: Relation of imagery to sensory experiences; the function of imagery in interpreting the present by the past and in forming aims, purposes, and

plans; power of imagery as varying in different people; types of imagery; the reconstruction of images; reproductive and productive imagination; their relation to each other; simultaneous association of images, as in perception; successive association of images in the train of thought; laws of association; physical basis of association; training the imagination as involving the storing of the mind with a rich stock of usable images and giving facility and dexterity in grouping images into new wholes for the sake of a definite purpose; school studies and activities as a means of training the imagination; study of children for the purpose of determining the "mind stuff" in which they think.

Memory: The characteristic features of memory; the relation of memory to reproductive imagination; retention, recall and recognition as factors in memory; characteristics of a good memory; recency, vividness, frequency and association as factors in efficient recall; training of memory; cultivation of memory as improvement in methods of recording facts; methods of securing vividness of original impression; relation of attention to retention; rules or proper use of repetition; methods of securing association and organization; cramming and its effects.

Thinking: The importance of consciousness of meaning in the development of mental life; meaning dependent on relations; thinking as the process of grasping relations; thinking of the child and the adult compared; analysis of conceptional thinking; nature and growth of a concept; the place of the image in conception; the relation of conception to language; judgment as a phase of thinking; sound judgment as an end in education; reasoning as purposive thinking; deductive reasoning; inductive reasoning; the interrelation of induction and deduction; principles involved in training in thinking; school studies as a means of training in thinking.

Feeling and Emotion: Various uses of the term feeling; feeling as the tone of a conscious state; qualities of feeling; relation of feeling to cognition and to motor reaction; nature of emotion; relation of emotion to instinct and to feeling; conditions upon which the appearance of emotion depends; functions of feeling and emotion, their influences on attention, judgment and effort; outline study of some of the more significant emotions; directions along which emotional development should take place; place of habit in emotional development, the growth of moods, sentiments, temperaments, and dispositions; significance of school studies and activities in the growth of feeling and emotion.

Will: Involuntary and voluntary action compared; a voluntary act as the attentive selection of one way of action as against another; the place of deliberation, effort and choice in a voluntary act; factors in a well-balanced will; study of volitional types which vary from the normal, such as, the impulsive type and the obstructed will; relation of involuntary action to voluntary in the training of the will; methods of developing normal will through the activities of the school and the home; methods of dealing with abnormal types of will; education in its relation to conduct; elements involved in moral training; the function of the school in moral training; effects of methods of instruction on morals; moral effects of school studies; value of specific moral instruction; character development as the full aim of education; factors in character development; the function of the school in character development.

Books of Reference:—

Betts: *The Mind and its Education,* $1.00.
Angell: Psychology.
Halleck: Education of the Central Nervous System.
James: Talks to Teachers.

III. *Child Study.*

20. The object of the course in Child Study is to enable the teacher-in-training to adapt intelligently his methods in each subject to the child's mind at the different stages of its growth. The course includes the following topics:—

The scope of Child Study; methods of investigation; importance to the teacher of the study of the child mind. Physical growth and development during infancy, childhood, and adolescence. Mental development during the same periods. Mental types and variations from normal mental conditions. Differences in individual children. The study of children along the lines suggested in the course in Applied Psychology.

Book of Reference:—

Kirkpatrick: Fundamentals of Child Study.

IV. *General Methodology.*

21. The object of the course in its final stage is to gather up the main facts and principles bearing most directly on methods of instruction which have been developed in connection with the various topics in Applied Psychology and Child Study; and, by dwelling on connections and relations, to organize the whole into a comprehensive and logical system of General Methodology [See 15 (1) (*a*)] and so to form a basis for the Special Methodology. The course includes the following topics:—

The Problem of General Method: The relation of general method to special methods and teaching devices; the relation of method to subject matter.

Planning for the Lesson: Principles to be observed in dividing the subject matter into topics or units of instruction; the adjustment of the lesson to the tendencies, needs and capacities of the pupils; the relation of the lesson to previous work and to the stage of development of the pupils; necessity for the teacher to study the class as well as the subject matter of the lesson.

Means of Presentation of the Lesson: Lecture, text-book, and question-and-answer methods of presentation; advantages and limitations of each; graphic representation as a means of presentation; diagrams, etc.; nature and functions of objective teaching; limitations of objective teaching; principles governing successful use of objects, pictures, models, maps, etc.

The Aim of the Lesson: Aim of lesson from the teacher's standpoint; aim of lesson from the pupil's standpoint; tendencies as the starting point in the growth of knowledge or the acquisition of skill; relation of the child's interest to native instincts and capacities and to the development of aims and purposes; the relation of interest to self-activity; the use of interest in the school-room; the normal attitude of the learner as an attitude of inquiry; the necessity for connecting the lesson with some pre-existing need of the child or of making it fit into some of his purposes or plans; the place of the statement of the aim of the lesson; the nature and purpose of the preview.

Preparation of the Class for the Lesson: Necessity for revival, and reconstruction of the old experiences of the pupil in giving meaning to the new lesson; the aim of the lesson as a purpose in the recall of old experiences; means of recalling and utilizing old experiences in the presentation of the new lesson; "preparation" as a formal step in method.

Development of the Lesson: The effect of the preview, the statement of the aim and the preliminary stage of preparation to fix in the mind of the learner a vague mental whole within which mental movement in the lesson takes place; the purpose of the development of the lesson to give definiteness to this whole; the development as a process of analysis, focusing attention on particular phases within the whole, and of synthesis, instituting relations among these particulars; typical illustrations from varied subjects to show the meaning and the universality of application of this principle; the interdependence of analysis and synthesis; learning as an analytic-synthetic process; the place of comparison and contrast in the development of the lesson.

The analytic phase in learning; the principle of selection of relevant analysis; the place of sense-perception, telling and inference in the development of individual notions; meaning of "analytic methods" of teaching.

The synthetic phase in learning; the adaptation and use of selected material; the development and application of universal notions; meaning of "synthetic methods" of teaching; inductive and deductive methods of teaching; "presentation," "comparison," "abstraction," "generalization," and "application," as formal steps in instruction.

Expression as a Stage in Method: Necessity for expression as a stage in rational method; interdependence of impression and expression; the importance of this interdependence as the basis for the constructive side of school work.

Typical Lesson Forms: The study lesson; the recitation lesson; the development lesson; the drill lesson; the review lesson; the construction of lesson plans.

Teaching Devices: Use of questioning in the development of the lesson; right and wrong methods of questioning; examination of the so-called Socratic method; answers; qualities of a good answer; treatment of faulty answers; mistakes in dealing with answers; illustrations; their office and value; uses of the blackboard.

Books of Reference:—

McMurry: *The Method of the Recitation,* 75 cts.
Bagley: The Educative Process.
Thorndike: Principles of Teaching.

History of Education.

22. The object of the course in the History of Education is to widen the professional outlook and rationalize school practice through the discussion of the development and of the merits and the defects of educational theories. It presupposes an historical background and discusses movements rather than individuals. The course includes the following topics, and deals only with the most important points:—

Education Prior to the Fifteenth Century: A *very brief* survey of significant movements, with reference to the following topics: Education among primitive peoples; education in Sparta and Athens, the idea of a liberal education; education in Rome, the idea of practical education; education and monasticism, education and chivalry, the early Universities.

The Renaissance: The relation of the Renaissance to modern civilization; its origin and educational significance; Erasmus, Vittorino da Feltre, and Sturm; influence of Renaissance upon subject matter, methods, and purposes of schools; humanistic conception of education: humanism and realism.

Reformation and Counter Reformation: The Reformation and the Renaissance; Luther and elementary education in Germany; Schools of the Jesuits and other religious Orders.

Realism in Education: Verbal realism as represented by Rabelais and Milton; social realism as represented by Montaigne; sense realism as represented by Bacon, Mulcaster and Comenius.

Education according to Nature: Development of the new conception of education; Locke and Rousseau.

Modern Educational Theories and Movements: Pestalozzi and the elementary school; Herbert and Methodology; Froebel and the Kindergarten; Spencer and scientific tendencies in Education; education as social adjustment; public education in Great Britain: the development of public education in Ontario.

Books of Reference:—

Monroe: *A Brief Course in the History of Education,* $1.00.
Quick: Educational Reformers.
Kemp: History of Education.

School Organization and Management.

23. The object of the course is to give the teacher, in the light of the Science of Education, a knowledge of the technique of school management and organization which will enable him to secure the smooth and efficient working of his school. The course includes the following topics:—

School Management: Its scope and its return to the Science of Education.

The Teacher: Natural qualifications of a good teacher; importance of scholarship, of training, of experience, of professional studies, of wide culture, of broad sympathies, of sense of responsibility, and of earnestness of purpose; the teacher's relations to the principal, inspector, trustees, parents; his civic and social duties; his personal power and influence in the school and in the community; his daily preparation for teaching; the care of his health.

Classification: Principles governing the classification of pupils in the school; the advantages and disadvantages of graded and ungraded schools; number and size of classes in urban and rural schools; common defects in class instruction; effects of over-teaching; advantages of class instruction; defects of a rigid class instruction; the value of the individual system; examination of various methods of promotion; the division of subjects and pupils among the several teachers in graded schools.

Daily Programme: Its purpose and value; principles involved in the construction of a time-table; seat work; individual blackboard work; question of fatigue; typical time-tables for graded and for ungraded schools; registration and school records.

School-room Routine: Chief varieties of mechanizing routine; their advantages and disadvantages; the appointment and duties of monitors; fire drill.

Desirable School Habits: Methods of securing desirable school habits such as punctuality, neatness in person and in work, accuracy, quietness, industry, obedience, etc.

Order and Discipline: Characteristics of good order; the relation of authority to discipline; the chief elements of governing power; rules, their value and enforcement; common faults and how to avoid them; discussion of methods of dealing

with typical offences; the relation of incentives and penalties to order and discipline; co-operation of school and home in matters of discipline.

School Incentives and Penalties: Classification of incentives; the effects of each on school work and on health and character; the values of punishment; characteristics of judicious and injudicious punishment; the discipline of consequences.

Physical Education: Relation of physical to intellectual development; importance of change of work; value of play and games; organized and unorganized play.

The School Building and Premises, and School Hygiene: The Grounds; situation, aspect, area, drainage, ornamentation, protection, water-supply, its sources, impurities, modes of purification. (See Departmental Circular.)

The Outbuildings: Location, structure, and supervision.

The School House: School architecture, size, shape, and suitability of rooms, hall, etc., importance of proper lighting; how to secure proper lighting, position of pupils with reference to windows; heating, warming by stoves, by hot air, by hot water, by steam, the advantages and disadvantages of each method, the jacketed stove; the thermometer, the hygrometer; fire-escapes and like appliances; ventilation; necessity for good ventilation; signs of vitiated air, moistening of air, quantity of fresh air needed, different methods of ventilation; furniture and equipment; desks and seats; necessity of adjusting the height to the pupil; blackboards, their size, situation, and kinds; cloak rooms and clothing; maps, globes, library, and other necessary apparatus and equipment; pictures and decoration of walls. (See Departmental Circular, No. 33, and XVIII. below.

School Law and Regulations: The Ontario School Law and Regulations in so far as they deal with the duties and obligations of teachers and pupils.

Books of Reference:—

Bagley: Class Management.
White: School Management.
Landon: Principles and Practice of Teaching and School Management.

Special Methodology.

24. The object of the course is to prepare the teachers-in-training for intelligently observing and teaching in all grades of the Model Schools, by enabling them to apply the principles of education and, in particular, to adapt to the work in each subject the principles of General Method. The work in the special method of each subject is introduced by a few lessons of a general character, embracing the application of the principles of General Methodology to the teaching of the subject. These introductory lessons are followed by a series of a more detailed character, dealing with:

(1) The selection and the organization of material for the Public School Forms, taken in order, from the standpoint of presentation to the pupil.

(2) The discussion of special methods of instruction, concurrent with the academic review of the subject matter.

The courses shall be taken up in terms of the Public School Programme of Studies, the provisions of which shall be constantly kept in mind.

General Books of Reference:—

The Pubilc School Manuals.

Carpenter, Baker and Scott: Teaching of English.
Chubb: Teaching of English.
MacClintock: Literature in the Elementary School.

Arlo Bates: Talks on the Writing of English.
Arlo Bates: Talks on the Teaching of Literature.
Hodge: Nature Study and Life.
Dearness: How to Teach Nature Study.
Silcox and Stevenson: Nature Study.
Scott: Nature Study and the Child.
Coulter: Practical Nature Study.
Geikie: Teaching of Geography.
Arnold Foster: This World of Ours.
Morang & Co.: The Study of Geography.
Smith: Teaching of Elementary Mathematics.
Young: The Teaching of Mathematics.
Annandale: The Concise Imperial Dictionary.

1. *Language and Composition.*

25. The special object of the course in Language and Composition is to prepare the teacher to train his pupils to speak and to write good English as a fixed, unconscious habit. The course includes the following topics:—

The importance of language training; the place of a knowledge of the mother-tongue in education; the value of clearness, force and grace of expression.

Oral and Written Composition: Their relation; how habits of speaking and writing good English are formed; the effect of the teacher's example upon the pupil's language; value of reading and of memorizing good literature; importance of libraries for supplementary reading; incidental work in language training; expression as a stage in the development of every lesson; necessity for special exercises in oral and written composition.

Methods in Oral and Written Composition: Methods of encouraging pupil's free natural expression and of extending his vocabulary through oral exercises; principles governing criticism of oral work; the dangers connected therewith and the means of avoiding them; value of formal linguistic exercises; method of correcting common errors; relative value of pupil's own language and of special exercises in false syntax as material for criticism; the principles to be kept in view in conducting exercises in written composition; supervision and aid during writing; value of topical outlines; the place of home work in written compositions; method of correcting compositions; value of re-writing.

Mechanics of Written Composition: Sentence and paragraph structure; paragraph compositions; the use of capitals, punctuation marks, quotation marks, abbreviations, etc.

Materials for Written and Oral Composition: Principles governing choice of topics; gathering, selecting and arranging material; class answers as material for oral composition; importance of framing questions that will require answers of considerable length; the reproduction of fairy and folk stories, fables, poems, biographies; relative value of reading and telling stories; transition from reproduction to originality; descriptions of personal experiences, real and imaginary, and of places, operations and processes of personal interest; striking incidents in the history of the families of the pupils; pictures suggestive of stories, school games, autobiographies of familiar things; developing themes from minor incidents, themes connected with school studies, general themes; letter writing, with special attention to form and style; invitations and replies thereto.

II. *Reading.*

26. The special object of the course in Reading is to prepare the teacher to train his pupils to get the writer's thought and feelings (*intelligent reading*) and to communicate them to the listener so that he may appreciate them (*intelligible reading*). The course includes the following topics:—

The Scope of Reading: Its correlation with other subjects; importance of training in reading and the principles of vocal expression to pupil's ordinary speech and general culture.

The processes involved in reading: The relation of ideas to symbols; the associations of visual, auditory, and motor images in reading; conditions of the formation of accurate visual and auditory impressions; constant necessity for connecting the printed symbol directly with the idea.

Forms of Reading: The function and value of silent reading; sight reading, dramatic reading, elocution, declamation.

Methods in Reading: Examination of the various methods of teaching beginners to read; advantages and disadvantages of each; devices for securing rapid word-recognition and for fixing attention on the thought and feeling as well as upon the word forms in the earlier stages; means of securing natural expressive reading; the place and limitations of imitative reading; common faults on the part of both pupil and teacher and how to correct them; criticism by teacher and by pupils. Change in purpose and methods of reading as determined by the development of the pupil's experience and powers; the necessity for giving attention to expression in all stages; expression to be based on impression; the objects of advanced reading; methods of developing in pupils the habit of reading for thought and pleasure; reading as a means of creating and fostering a taste for good literature.

Mechanics of Vocal Expression: The necessity for attention to the principles of vocal expression; time, inflection, pitch, force, quality, pause, phrasing, emphasis, stress; and to exercises for rendering the organs of speech subservient to the will—vocalization, articulation, breathing, development of chest and lungs, vocal training for pure tone; the connection between the reading lesson and the singing lesson.

III. *Spelling.*

27. The special object of the course in spelling is to prepare the teacher to secure accuracy in the mechanism of written word-expression. The course includes the following topics:—

Scope of Spelling: Its correlation with other subjects; nature and origin of peculiarities of English orthography; causes of the difficulties experienced by pupils in learning to spell; causes of incorrect spelling.

Methods of Spelling: Necessity for teaching, not merely testing spelling; examination of the various methods of teaching spelling; the adaptation of each to the nature of the words and to the individual mental characteristics of pupils; phonic exercises and word-building in relation to spelling; syllabication; the place of transcription and dictation; methods of checking and correcting errors; value of re-writing; prevention *versus* correction; the character of drill and review exercises in spelling; methods of varying the spelling recitation; value of rules in spelling.

Materials for Spelling: Principles of selection of material for spelling; grouping of words for the purpose of spelling; incidental spelling; uses of the dictionary and of the spelling book.

IV. *Literature.*

28. The special object of the course in literature is to prepare the teacher to create in his pupils a taste for good literature, while broadening their knowledge, moulding their characters, and aiding them to appreciate the beauty and the power of artistic expression of thought and feeling. The course includes the following topics:—

The nature and elements of literature.

Selection of Subject Matter for Literature Lessons: Qualities of literature that appeal to children of different ages; basis of selection of material for different grades; lists of suitable fairy tales, fables, nature stories, etc., adapted to children of lower grades and of general works for pupils in the highest forms; complete wholes *versus* extracts; the correlation of literature with nature study, geography, history, etc.

Methods in Teaching Literature: Methods of dealing with primary literature; comparison of values of reading and telling; method in supplementary reading contrasted with that in exact study; the extensive and intensive study of literature; the importance and method of memorizing selections; the value of oral reading in the interpretation and appreciation of literature; the importance of the teacher's own ability to read well; the futility of attempts to develop formally the critical sense.

Lesson Procedure: Preparation of the pupils; necessity for preparing a suitable mood for the lesson; how far the author's biography and the experience of the pupils have a place here; preliminary reading of the selection; the main thought of the lesson grasped and the main feeling of the lesson impressed in a more or less indefinite way through a reading of it; the analysis of a selection into its wider thought elements and feeling elements, and the analysis of these again into their elements; the place of explanation of words and phrases; the use of the dictionary; the relation of the subordinate thoughts and feelings to the unity of the whole, the main thought and feeling of the selection as made definite by the analysis; the oral reading of the selection by pupils after study; the value of oral and written reproduction; suitable seat work.

Examinations in Literature: Difficulties of examining in literature; specimen examination questions.

Teacher's Preparation: Special importance of teacher's own qualifications, a class course in Literature, in part based on the poetic selections in the Readers; the literary study of portions of the Bible prescribed by the Department of Education; sessional private reading courses for teachers-in-training; suggestions for their future reading.

School Library: Principles to be kept in view in selecting works for the school library; methods of making use of school library; means of securing the co-operation of the home in the pupil's reading.

NOTE.—Teachers-in-training having conscientious objections to the literary study of the Bible shall be excused therefrom by the Principal. Religious instruction by local clergymen of the different denominations is provided in each Normal School.

V. *Grammar.*

29. The special object of the course in grammar is to prepare the teacher to train his pupils in habits of logical analysis, and to give them a basis for self-criticism in language by developing the principles of language structure. The course includes the following topics:—

Meaning of English Grammar; the relation of grammar to speech; correlation with other subjects; reasons for and against retaining it in elementary schools; reasons for deferring the formal study till Form IV.; introductory work of Forms II. and III.

The sentence as the starting point; basal value of function; order and method of teaching the parts of speech; principles of classification as applied to grammar; inflection, use and value of our remaining inflections; rules of syntax, their value; use of grammatical terminology; definitions, their value, how to be obtained, how to be applied; analysis and parsing, aim and value of each; value of diagrams; oral and written exercises; treatment of false syntax; elementary etymology, the derivation and composition of words.

VI. *History.*

30. The special object of the course in history is to prepare the teacher to train pupils to adapt human experiences to present situations. In the elementary stages the chief objects are to arouse an interest in historical studies, to enable the pupils to appreciate the logical sequence of events, and to give them a knowledge of their civil rights and duties; also to stimulate a love of country. The course includes the following topics:—

The Scope of History: The correlation of history with other subjects, especially geography; the special value of Canadian and British history; the proper perspective in the development of the subject; arts enlarged in the academic review; what makes an event important.

Methods: The recitation, its form and purposes, the place of oral teaching and of blackboard work by teacher, and of written exercises at seat and at blackboard by pupils; methods in oral and in written work; the use of pictures, maps, etc., of readers, of source books, of the text-book, and of current journals and periodicals.

Stages in the Course: Special necessity for the adaptation of the teaching of history to the pupil's growing knowledge and logical capacity. The picture and story stage, a methodically arranged series of picturesque biographies graphically narrated; no text-book. The information stage; an introduction to history proper, methodically presented; external and picturesque side made prominent, with emphasis on biographical and social aspects; introduction of history readers and biographies in the library. The reflective stage; the study of casual relations and of the origin, development, and inner life of our institutions.

The selection and arrangement of material suitable for different grades; the place and purpose of each of the following:—

History of aborigines, current history, pioneers, local history.

Characteristics of peoples, as those of the United States, Japan, China, Germany, France, Italy, Quebec.

Biography: The natural attractiveness of biography; the relation of biography to history; the effects of a study of biography on the development of character; selection of suitable biographies for pupils of different grades, as the lives

of explorers, navigators, and soldiers for primary grades; of statesmen, poets, scientists, etc., as representing more complex conditions, for pupils of higher grades.

Civics: Ends to be kept in view in teaching civics; consideration of work to be undertaken in civics; study of civic institutions as appearing in their lowest forms among primitive peoples; the beginnings of governments, of courts, of school systems, of factories, of routes and means of transportation, etc., study of present forms of civic institutions.

Epochs: Their relation to biography; systematic chronological study of history; its value and its dangers; the casual sequence of events.

Supplementary Material: The use of mythology, ballads, orations, epics, legends, tales of chivalry, narrative poems, and historical novels; character of history readers and of supplementary works for the different grades. Significance and value of the flag.

VII. *Geography.*

31. The special object of the course in geography is to prepare the teacher to extend the pupils' knowledge of the earth and its relation to life thereon, and to assist them in interpreting and utilizing their physical environment in accordance with their needs. The course includes the following topics:—

The scope of geography; its relation to other subjects, especially to nature study, history, and elementary science.

The review of the course should lay special emphasis on the study of the earth's surface and the changes wrought thereon by the various agencies; rock formation and disintegration; origin, formation and composition of soils; distribution of mineral deposits, not overlooking local deposits of building material, as marl, limestone, brick, clay, and sand, and also of plant and animal life; the relation of the earth to other heavenly bodies; weather and climate; man's relation to the rest of the world; interdependence of nations; commercial and political geography.

Methods: Consideration of the order of development of the subject in rural and urban schools; the use of maps, globes, pictures, blackboard drawings, natural objects, specimens of products, lantern slides and stereoscopic views; modelling, map drawing, scales and projections; weather observations and records, simple experiments in explanation of natural phenomena (see course in elementary science); excursions in connection with the observations in local geography; inter-school correspondence; the use of reference library, books of travel, geography readers, newspapers and periodicals, etc., common mistakes in teaching geography and means of avoiding them.

VIII. *Nature Study and Agriculture.*

32. The special object of the course in nature study is to broaden and deepen the teacher's sympathies and interests, and, through him, those of his pupils, by training him to observe and interpret the common phenomena of the world about him. The course includes the following topics:—

The character and scope of nature study; its relation to formal science; its correlation with other subjects.

Materials for Nature Study: Conditions determining the choice of material for nature study lessons for pupils of different grades, and for varying conditions

in rural and urban schools; uses and limitations of books, pictures, models, collections, etc., supplementary materials such as stories, literature, etc.

Methods in Nature Study: Nature study as a method; special characteristics of a typical nature study lesson; uses and limitations of records of observations; directions for conducting school excursions. The study of special topics dealing with materials of nature study and illustrating methods of presentation in all grades of public schools, the topics to be typical and to be selected from various grades and departments of the Public School course of study; the relation of feeling to knowledge in nature study work.

School Gardens: The purpose of school gardens; school gardens as a phase of nature study work; their relation to agriculture and horticulture; the discussion of the purpose and possibility of the study of agriculture and horticulture in urban and rural schools; care of school gardens.

Practice in planning and plotting a garden; planning school grounds for tree planting in accordance with the principles of landscape gardening; preparation and planting of experimental plots in the school grounds to illustrate the benefits of rotation, fertilizing, spraying, mulching, etc.

NOTE.—Teachers-in-training should make frequent excursions for the purpose of studying materials in their natural environment and relations. They should make collections of different kinds for their own use as well as to enable them to direct as teachers the practical side of nature study. The nature of the collections will be regulated by the kind of school in which the student will likely teach; rural teachers should make collections of weeds, weed seeds, economic plants, diseased plants, injurious and beneficial insects, etc.; urban teachers, of factory products, garden flowers, etc. Besides acquiring experience in planning and planting gardens, teachers-in-training should visit schools where successful garden work is being done.

IX. *Elementary Science.*

33. The special object of the course in elementary science is to give the teacher a better appreciation of its general principles, a more accurate knowledge of its facts, and greater familiarity with apparatus; so that he may be able to teach natural and experimental science systematically. The course includes the following:—

The scope of the experimental and natural sciences; their correlation with other school studies.

A comprehensive and practical review of the course in elementary science prescribed for the Lower School of High Schools, the emphasis in experimental science being placed on those facts and principles of chemistry, mechanics, heat, sound, light, and electricity which are essential to the understanding of common natural phenomena.

The construction of simple apparatus. (See Manual Training course.)

The Microscope: Its construction and use; selection and preparation of material for microscopic work, having direct reference to bacteriology—a brief course.

Methods of Teaching: The meaning and value of observation and experimentation; inductive and deductive methods of investigation; the place of class room discussion; demonstration by the teacher and laboratory work by the pupil; the use of note-books and text-books.

NOTE 1.—The work in Elementary Science should be carried on through class-room discussions and laboratory work with emphasis on the latter. Teachers-in-training should become familiar with methods of experimentation and should attain skill in instrument manipulation. They should also be required to keep neat and accurate records of observation and experimental work.

NOTE 2.—In both the nature study and the elementary science course the subject matter of biology should receive more attention than that of physics and chemistry, which are subjects of the July Entrance Examination. The course in nature study is of more importance than that in experimental science.

X. *Arithmetic.*

34. The special object of the course in arithmetic is to improve the teacher's knowledge of the subject that he may use it effectively as a means of logical training, and more particularly that he may be prepared to give his pupils such instruction in the various arithmetical processes as will enable them to make with accuracy, rapidity, and facility, the calculations and computations which their future life may render necessary. The course includes the following topics:—

The scope of arithmetic; its relation to the other subjects of the curriculum; importance of its practical aspects as related to the lives of the pupils; danger of over-estimating its value as training in logic.

The origin of number as the result of the necessity for the valuation or limitation of quantity by measurement; the various steps involved in the development of the number idea; the unit, its nature and use; the necessity for standard units; number, a ratio.

Methods in Arithmetic: Analysis and synthesis, induction and deduction,—compared, illustrated and applied ; graphic methods ; use of concrete material in making clear new processes and in verifying and interpreting operations performed ; the use of text-books and of prescribed apparatus ; the importance of training in, and devices to secure, neatness, accuracy, and speed in computation; the importance, place and treatment of oral arithmetic ; the value of problems ; the essentials of proper solutions; solutions by full analysis, and by performing operations only; "unitary" method and method of direct measurement; grading of problems ; interest in problems for which the pupils themselves furnish the material ; blackboard work ; drill and examination work in arithmetic.

A thorough treatment of the various arithmetical operations and their applications with special stress upon the requirements of teachers engaged in public school work. This should include the following :—

Counting, measuring with standard units; numbers from 1 to 10, from 10 to 20, etc.; number pictures, notation and numeration; addition tables, exercises, devices ; subtraction—by decomposition, by equal additions, and by complementary additions; multiplication—relation to other operations, tables, exercises, factors; division—short and long, factoring, cancellation, division by factors ; measures and multiples.

Fractions: How and when to be introduced, different interpretations, notations, rules for operations deduced and applied ; decimal fractions, correspondence of methods of numeration, notation, and operations with those of integers, recurring decimals.

Applied Arithmetic: Percentage, trade discount, commission, insurance, taxes, interest, discount, stocks, exchange; tables of weights and measures; the metric system; mensuration, including the areas of rectangles, triangles, parallelograms, and circles, and the volume of rectangular solids, cylinders and prisms; square root.

XI. *Algebra.*

35. The special object of the course in algebra is to familiarize the teacher with its fundamental conceptions and to prepare him to present the various pro-

cesses of the subject in the most effective way. Having regard to the fact that algebra is arithmetic generalized, its special object is the same as that of arithmetic. The course includes the following topics:—

The scope of algebra; when the subject should be introduced.

Relation of algebra to arithmetic; a comparison of the nature and application of its symbols and operations with those of arithmetic; the equation as a means of connecting the subject with arithmetic and of introducing its symbols; the origin and explanations of algebraical symbols; the relation of algebra to geometry.

The use of induction, deduction, and mathematical induction in algebra.

Methods of Teaching algebraic notation, addition, subtraction, multiplication, division, formulæ, factoring, measures, multiples, fractions; testing algebraic operations by "checking."

The Equation: Its nature; identities; the solution of equations of one and of two unknowns, and of easy quadratics; the mathematical axioms employed in these solutions; the interpretation of results; the equation applied to the solution of problems; comparison, where possible, of algebraic with arithmetical solutions.

XII. *Geometry.*

36. The special object of the course in geometry is to prepare the teacher to train his pupils to attain skill in the use of instruments, in accurate measurements, and in drawing; and, through these, in inductive and deductive reasoning. The course includes the following topics:—

The scope of geometry; when it should be begun; methods of treatment—inductive and deductive; the relation of inductive geometry to deductive geometry; the inductive course for beginners.

Method of introducing the definitions.

The use of simple instruments, compass, protractor, divider and set square, in the measurement of lines and angles; the construction of lines and angles of given magnitude; the construction of geometrical figures.

The inductive method of proving some of the leading propositions of Euclid, through the accurate construction of figures; the deductive application of principles reached through induction.

Throughout the course, accuracy in construction shall be insisted upon as co-ordinate with exactness of thought.

XIII. *Writing.*

37. The object of the course in writing is to train the teacher to write rapidly and legibly, and to make him familiar with the best means of securing the most satisfactory results in the teaching of the subject. The course includes the following topics:—

The purpose of writing; its correlation with other subjects.

A brief outline of the different methods of teaching the subject.

Penholding; position at the desk; position of the paper; the proper formation of the small and the capital letters and the figures; various movement exercises; practice on paper and on the blackboard.

Use of headlines and copy-books; use of blank paper; its ruling; value of transcription, dictation, and composition in writing; how general and individual faults are corrected; the formation of a characteristic hand; how to deal with

pupils having some physical disability. Business forms, including bills, receipts, promissory notes, cheques, drafts.

A brief review of the Lower School course in book-keeping, also affording practice in writing.

NOTE.—After the teacher-in-training has mastered in class the proper formation of the letters, etc., and the movement exercises, the master should require him to hand in from time to time exercises for criticism until his handwriting is satisfactory.

XIV. *Art Work.*

38. The special object of the course in art is to give the teacher such a knowledge of the subject, such a training of his æsthetic nature, and such facility in the use of art as a means of expression as will enable him to develop like tastes and powers in his pupils. The course includes the following topics:—

The scope of art: art as a mode of expression and a means of æsthetic culture; its correlation with other subjects in the school course.

Freehand Drawing: How to use the various mediums, pencil, charcoal, crayons, ink with pen or brush; the drawing of common flat objects such as leaves, grasses, brooms, shovels, saws, hammers in an appropriate medium; the drawing of common spherical, cylindrical, and rectangular solids, illustrating the principles of free-hand perspective; the grouping of objects; simple landscapes from nature and imagination; illustration of games, occupations, nursery rhymes and stories; pose drawing.

Blackboard Drawing: The use of white, black, and coloured crayons on the blackboard and on large pieces of paper; rapid illustrative sketches to aid in the teaching of all subjects; blackboard drawing specially important to the teacher as a means of expression.

Water Colours: Theory of colour; the solar spectrum; the six standard colours, red, orange, yellow, green, blue, and violet; the intermediate hues, red-orange, yellow-orange, yellow-green, blue-green, blue-violet and red-violet; the tints and shades of each colour in graduated scales; the pigmentary theory; primary, secondary, and tertiary colours; complementary colours; colour harmony, dominant, analogous, and complementary; the neutral value scale; the making and applying of graduated and uniform washes; the representation in colour, neutral values, and sepia, of leaves, grasses, flowers, fruits, trees, insects, pet animals, birds, and common objects; the grouping of objects; simple landscapes from nature and imagination; elementary composition of pictures.

Decorative Design: The principles that determine the rhythm, balance, and harmony of tones, measures, and shapes; borders, surface designs, designing of Christmas cards, programmes, book covers; lettering; designs to be done in neutral value first and then carried out in colour.

How to study a picture; the critical study of a few masterpieces of painting.

BOOKS OF REFERENCE:—

Prang's *Text Books of Art Education;* 7 books, $2.40.
Prang's Art Education for High Schools.
Prang's Drawing Course.
Atkinson, Mentzner and Grover: Applied Arts Drawing Books.
D. C. Heath & Co. The Parallel Course Drawing Books.
H. W. Poor: How to Draw.
Practical Drawing: Arts and Crafts Course—8 parts.

XV. *Manual Training.*

39. The special value of the course in manual training is to train the teacher to appreciate the educational value of various forms of constructive work, and to select and use in the most effective ways constructive exercises in the varying conditions of urban and rural schools. The course includes the following topics:—

The scope of manual training; its correlation with other subjects in the curriculum; the selection of exercises based on the requirements of the school and the home; outlines of courses in the different forms of hand work. The practical course includes the following with concurrent methodology:—

Handwork for Primary Grades: Typical forms of constructive work adapted to the capacities of children in the lower grades, including weaving, elementary paper and cardboard work and modelling.

Drawing: A short course in mechanical drawing with and without instruments; plans and blue prints.

Advanced cardboard work; book-binding, simple repair of books; trimming and mounting of pictures.

Modelling: Materials used for modelling and how these are kept; modelling natural forms; plotting; modelling as a means of teaching geographical concepts; supplementing observation of the topography of school neighbourhood; supplementing word pictures in readers, etc.; models used in conjunction with drawing, etc.; in teaching principles of design.

Woodwork: Tools and how to keep them in good working order; designing; a short course in bench work; uses of woods and their suitability to such uses.

The construction of simple forms of school apparatus in wood, metal, glass, and their combinations.

Co-operative exercises in the above forms of work.

XVI. *Household Science.*

40. The special object of the course in household science is to enable the teacher to relate the work of the school to the activities of the home. It is a form of manual training, and possesses the same educational value. The course includes the following topics, with concurrent methodology:—

The Home: Purpose; use, furnishing, and care of each room; methods of cleaning.

Foods: Elements of food required by the body; digestibility of these; analysis of common foods—milk, eggs, meat, fruit, vegetables, cereals; effect of heat on these as to food value, digestibility, and flavour.

Cookery: Principles of combustion; care of stoves; fuels; economy in the use of fuel; principles and practice of each method of cooking—boiling, simmering, steaming, steeping, toasting, broiling, frying, baking, etc.; food combinations; flour mixtures; lightening agents used in these; table service.

Bacteriology: Occurrence and nature of bacteria; sanitation based on this knowledge; preservation of foods.

Needle Work: A study of each stitch on different textures and fabrics; application of these in making simple articles as bags, aprons, handkerchiefs, needle-cases, towels, etc.; mending, darning, patching, using different textures and fabrics; button-hole making, sewing on buttons, hooks and eyes; colour combinations; making dolls' clothes.

XVII. *Music.*

41. The special object of the course in music is to train the teacher in the use of music as a means of self-expression and of æsthetic culture. The course includes the following topics:—

Tune: Practice in singing from the staff and tonic-solfa modulators; intervals of moderate difficulty, contained in the major diatonic scales; modulation from any given key to its relative minor, and its dominant and subdominant.

Time: Practice in singing rhythmical studies in simple or compound duple, triple, or quadruple times; the pulse as the unit of measurement in time, with its divisions into halves, quarters, or thirds in varied combination.

Ear training: Development of the power to recognize by ear, and to transcribe the tonal and rhythmic elements of short musical phrases, when sung or played.

Voice Culture: Practice in correct tone production; vowel formation; enunciation of consonants; breath control; correct intonation; and the equalization of the various registers of the voice.

Songs: The study of songs suited to the requirements of pupils in all grades of public and separate schools, with special attention to development of power in musical expression; the study of part songs of recognized merit, arranged for adult voices.

Notation: Elements of notation, both tonic-solfa and staff; the formation of the major and minor diatonic scales; elements of modulation and transposition.

Vocal Physiology: Comparison of abdominal, intercostal, and clavicular breathing; the larynx; action of the vocal chords in the production of the various vocal registers; influence of the mouth and nasal cavities on vocal resonance and vowel quality.

Methods: Concurrently with the foregoing course, a practical knowledge of recognized systems of teaching the tonic-solfa and staff notations shall be acquired; also of the relative importance of the staff and tonic-solfa systems and the grading of musical studies.

NOTE.—Teachers-in-training who, from any cause, consider themselves incapable of learning to sing should present their cases to the teacher of music at the beginning of the term. If, on examination, it should be found necessary, special instruction will be provided, adapted to their needs: and their efforts to overcome any natural disability which may be found to exist, will be taken into account at the oral examination at the close of the term. Note form of certificate. The written examinations, however, are compulsory for all students.

XVIII. *Physiology and Hygiene.*

42. The object of the course in physiology and hygiene is to train the teacher in the knowledge requisite for the maintenance of the health of both himself and his pupils, and to qualify him for supervising the sanitary conditions of the school and its surroundings. The course includes the following topics:—

School Hygiene: School sanitation. (See under School Management, p. 17.)

Contagious and Infectious Diseases: Common facts of bacteriology, how to detect existence of common infectious and contagious diseases; modes of preventing spread of these diseases; sanitary legislation; duties of the teacher.

Personal Hygiene (with the necessary minimum of anatomy): Framework of the body; spinal curvature, its causes. Digestive system; foods, care of teeth; saliva. Physiology of respiration and circulation. Skin and other depuratory organs, hair, nails, bathing, clothing, etc. Muscles; the relation of exercise to health. Brain and nervous system; relation of mind to body; mental exercise;

study; rules regarding mental work; irregular and overwork; mental strain and worry. Effects of alcohol, tobacco, etc., on organs and functions.

The eye: Its physiology and hygiene; lighting; myopia and presbyopia; affections produced by improper accommodation; colour blindness; tests for defective eyesight.

The ear, the nose, and the throat: Their physiology and hygiene; ear and throat troubles, causing dulness in pupils; tests for defective hearing and breathing.

Accident and Emergencies: First aid in such cases as fainting, suffocation, drowning, hemorrhage, fractures and dislocations, venomous stings, poisoning, frost-bites, sunstrokes and heatstrokes, burns; bandaging.

BOOK OF REFERENCE:—

Knight: Introductory Physiology and Hygiene.

XIX. *Physical Training.*

43. The special object of the course in physical culture is to enable the teacher to make proper provision for the physical training of his pupils. With physiology and hygiene (school and personal) as a basis it prescribes and directs rational forms of exercises for the attainment and maintenance of health, the development of a symmetrical body, and the formation of habits of grace and ease in muscular movement. To this end the teacher-in-training should be made familiar with the German, Swedish, French (Delsarte), and American systems of physical training. The course includes:—

Breathing Exercises: Running, hopping, quick walking.

Leg Exercises: Standing positions, fundamental stride, etc.; standing with flexions of ankles and knees; fall-outs; charges, fencing positions and kneelings.

Arm Exercises: Starting position, hands at side, at shoulders, at thrust, at upward bend, at formal bend; movements of raising, swinging, rotation, circling, flexion, and intension.

Neck and Trunk Exercises: Flexion, extension, and rotation.

Free Exercises: All the simpler forms from fundamental positions; also compound movements of two parts in the same, opposite, and right-angled directions.

Tactics: Facings and steppings; marching in various formations of rank, file, column, etc.; fancy steps, following and changing steps, etc.; running.

Special Exercises: For correcting the individual defects that may be found among children.

Recreative Gymnastics: Indoor and outdoor games.

XX. *School Law and Regulations.*

44. The Ontario School Law and Regulations so far as they deal with the duties and obligations of teachers and pupils.

XXI. *Manners.*

45. A course in manners. Especial care shall be taken that, while in attendance, the teachers-in-training shall observe the rules of courtesy and social etiquette.

BOOK OF REFERENCE:—

Practical Etiquette.

NORMAL MODEL SCHOOLS.

46.—(1) The terms of the Normal Model Schools shall correspond with those of the Public Schools in cities. The regulations of the Department of Education with regard to pupils and teachers in Public Schools shall apply to the teaching staff and to pupils of the Model Schools, subject to any modification that may be made from time to time by the Minister of Education.

(2) The Head Master of each Normal Model School and the director of the Provincial Kindergarten shall act under the direction of the Principal of the Normal School to which their respective departments are attached, and shall be responsible to him for the order, discipline, and progress of the pupils, and also for the accuracy and usefulness of the lessons conducted by the teachers-in-training.